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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,857	03/30/2007	Rached Ksontini	90500D-000083/US	4881
36593 7590 02/14/2011 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER VAUGHAN, MICHAEL R				
ART UNIT		PAPER NUMBER		
2431				
MAIL DATE		DELIVERY MODE		
02/14/2011		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/577,857

**Applicant(s)**

KSONTINI ET AL.

**Examiner**

MICHAEL R. VAUGHAN

**Art Unit**

2431

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The instant application having Application No. 10/577,857 is presented for examination by the examiner. Claims 1-19 are pending.

### ***Response to Amendment***

#### ***Double Patenting***

Examiner acknowledges Applicant's response to the double patenting rejection. Examiner will maintain that rejection as cited in the Office Action filed 9/8/08 until either the claims are amended enough to differentiate the conflicting claims or a terminal disclaimer is filed.

Claims 1-6, 8-11, 13, and 16-18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21-26, 29, 32, 33, and 36-40 of copending Application No. 10/577158. The detailed analysis of this rejection can be found in the Office action dated 09/08/2008.

### ***Response to Arguments***

Applicant's arguments filed 12/16/10 have been fully considered but they are not persuasive. Applicant argues the combination of Minemura and Aaltonen fails to teach an "identifier of security module resources".

Aaltonen teaches an application can be tied to a specific device (0065). The stamping of the application with the IMSI creates a link between the application and the security modules (SIM). This link authorizes the application to use a particular SIM. Use of a SIM literally means having permission to use the SIM resources or that the SIM will perform calculations on an application's behalf. Either way, the stamp provides the identifier to the SIM resources that the application will have access to. The claim does not require anything further than this broadest reasonable interpretation. In fact the claim does not specify what the resources are or how they are used. Given that Minemura teaches authentication of an application and Aaltonen teaches authorizing the application to the security module, the combination is obvious. Authorization requires authentication first. Once the identity is confirmed, it may then be allowed access to resources afforded said identity. Contrary to Applicant's statements, there is no confusion between the authentication and authorization, but rather they go hand-in-hand to create a secure embodiment. One of ordinary skill in the art could have used both authentication and authorization together in the manner set forth by the claimed invention. In view of the foregoing, the rejection must be maintained.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP Application Publication 2003/0114144 to Minemura in view of USP Application Publication 2005/0097053 to Aaltonen et al., hereinafter Aaltonen.

As per claim 1, Minemura teaches an authentication method of at least one application working in a equipment [terminal] connected by a network to a control server [server/service company], said equipment being locally connected to a security module [authentication module], said application being at least one of loaded loadable and executable via an application execution environment of the equipment and being adapted to use resources stored in the security module, the method comprising (see abstract):

analyzing and verifying by the control server of said data (0192),  
generating by the control server a cryptogram comprising a digest of the application (0084-0085 and Fig. 6), and instructions intended for said module (0125) and at least one of an identifier of the application [signature; 0105, 0141, and Fig 6; the license information is added to the signature which is part of the cryptogram sent by the sever],

transmitting the application and the cryptogram, via the network and the equipment, to the security module (0085), and

verifying, by the security module, the application by comparing the digest extracted from the cryptogram received with a digest determined by the security module (0085),

wherein, during at least one of initialization and activation of the application, the security module executes the instructions extracted from the cryptogram and, according to a result of the verification of the application, performs at least one of releasing and blocking access of certain resources of said security module to the application (0085). Minemura is silent in explicitly disclosing that the reception by the control server, via the network, of data comprising at least the identifier of the equipment and the identifier of the security module and that the cryptogram from the server includes these entities as well. Minemura does disclose teaching identifying data to the server from the terminal but not these specific entities. Aaltonen discloses sending these specific entities, the IMSI and IMEI information to authorize and authenticate a user terminal for downloading of content from another entity (0065). As known in the GSM architecture, the IMSI identifies the SIM modules associated with a particular user of the network. The IMEI identifies the equipment operating on the network. Aaltonen also teaches that when an entity is requesting application content from another network entity, the requesting entity sends its IMSI and IMEI in its request. The network entity possessing the application content then stamps the content with the received IMSI and IMEI in order to control the application's use by the receiver. Minemura is silent in explicitly teaching the cryptogram generated by the control server further an identifier of SIM resources. Aaltonen discloses sending IMSI of the recipient with the application content to

authorize and authenticate a user terminal for using the content (0065). As mentioned above the IMSI identifies a particular SIM.

Minemura teaching focuses on making sure that downloaded applications have not been tampered. Aaltonen emphasizes the mobile terminal's control of an application once it has been sent. The claim is obvious because one of ordinary skill in the art could have combined the two teachings to increase security whereby mutual authentication used to protect both the server and terminal.

As per claim 2, Minemura teaches the equipment is a mobile equipment of mobile telephony (0013).

As per claim 3, Minemura does not explicitly the network is a mobile network of at least one GSM or GPRS or UMTS. Aaltonen teaches the network is a mobile network of at least one GSM or GPRS or UMTS (0002). Minemura's invention is in the mobile telephony art. GSM is one specific type of mobile communication. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Minemura's system on a GSM network.

As per claim 4, Minemura teaches the security module is a subscriber module inserted into the mobile equipment of mobile telephony of the SIM card type (0013).

As per claim 5, Minemura teaches the identification of at least one of the set mobile equipment and subscriber module is carried out from the identifier of the mobile equipment and from the identifier of the subscriber module suited to a subscriber to the network (0193).

As per claim 6, Minemura teaches the instructions included in the cryptogram received by the security module condition the use of the applications according to criteria established previously by at least one of the operator, the application supplier, and the user of the equipment (0125, 0141).

As per claim 7, Minemura teaches the criteria define limits of use of an application according to the risks associated with at least one of the software of said application and with the hardware of the equipment that the operator desires to take into account (0125, 0141 and solves the problem of 0008).

As per claim 8, Minemura teaches the verification of the application with the cryptogram is carried out at the time of at least one of the first initialization and the first use of said application (0210).

As per claim 9, Minemura teaches the verification of the application with the cryptogram is periodically carried out at a given rate [expiry rate] according to instructions originating from the control server (0143-0144).

As per claim 10, Minemura teaches the verification of the application with the cryptogram is carried out at the time of each initialization of said application on the equipment (0144).

As per claim 11, Minemura teaches the cryptogram is generated with the aid of an asymmetrical or symmetrical encryption key from a data set (0199) containing, among other data, the identifier of the equipment, the identifier of the security module, an identifier of the application (0141), the digest of the application calculated with an



unidirectional hash function and identifiers of the resources of the security module and instructions for locking/releasing of resources of the security module (0191).

As per claim 13, Minemura teaches the security module transmits to the control server, via the equipment and the network, a confirmation message when said security module has accepted or refused a cryptogram of an application (0087, provision of service).

As per claim 14, Minemura teaches the cryptogram is transmitted to the security module at the same time as the application is loaded into the equipment via the execution environment of the applications (0210).

As per claim 15, Minemura teaches the application, once loaded into the equipment from the control server via the network, requests a cryptogram from the server at the time of its initialization and transmits said cryptogram to the security module (0089), the confirmation message of acceptance or refusal of the cryptogram being transmitted by the security module to the server via the application (0210).

As per claim 16, Minemura teaches the equipment is a Pay-TV decoder or a computer to which the security module is connected (0078).

As per claim 17, Minemura teaches a security module [authentication module] comprising resources intended to be accessed locally by at least one application installed in an equipment [terminal] connected to a network (see abstract),  
said equipment including means for reading and transmitting data (0085),

said module further including means for reception, storage, and analysis of a cryptogram and of the at least one application received with the cryptogram (Figure 6)

wherein the cryptogram includes, a digest of said application (0193) and instructions (0125),

means for verification of said at least one application (0192), and

means for extraction and execution of the instructions contained in the cryptogram, the means for extraction and execution performing at least one of blocking certain resources of the security module to the at least one application according to a result of the verification of the at least one application (0085-0089).

Minemura is silent in explicitly disclosing that the data includes at least the identifier of the equipment and the identifier of the security module and that the cryptogram from the server includes these entities as well. Minemura does disclose teaching identifying data to the server from the terminal but not these specific entities. Aaltonen discloses sending these specific entities, the IMSI and IMEI information to authorize and authenticate a user terminal for downloading of content from another entity (0065). As known in the GSM architecture, the IMSI identifies the SIM modules associated with a particular user of the network. The IMEI identifies the equipment operating on the network. Aaltonen also teaches that when an entity is requesting application content from another network entity, the requesting entity sends its IMSI and IMEI in its request. The network entity possessing the application content then stamps the content with the received IMSI and IMEI in order to control the application's use by the receiver. Minemura teaching focuses on making sure that downloaded applications

have not been tampered. Aaltonen emphasizes the mobile terminal's control of an application once it has been sent. The claim is obvious because one of ordinary skill in the art could have combined the two teachings to increase security whereby mutual authentication used to protect both the server and terminal.

As per claim 18, Minemura teaches the security module [IC] is at least one being of the "subscriber module" and "SIM card" type intended to be connected to a mobile equipment (0013).

As per claim 19, Minemura teaches the security module is a subscriber identification module [IC] inserted into the mobile equipment of mobile telephony (0013).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minemura and Aaltonen as applied to claim 11 and in further view of USP Application Publication 2002/0012433 and to Haverinen et al, hereinafter Haverinen.

As per claim 12, Minemura and Aaltonen are silent in disclosing a predictable variable in the cryptogram. Minemura does teach using a random number to prevent replay attacks (0192). Haverinen teaches that timestamps can be used as a substitute to random number in authentication to prevent replay attacks. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the timestamps in the cryptograms as a means to prevent malicious replay attacks by a

third party. Timestamps are known to be an adequate method of performing the same function of a random number in the art of computer security.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL R. VAUGHAN whose telephone number is (571)270-7316. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm, EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. V./

Examiner, Art Unit 2431

/William R. Korzuch/

Supervisory Patent Examiner, Art Unit 2431